Psoriasis mimicking mycosis fungoides clinically

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Abstract

Psoriasis is a complex, chronic immune-mediated inflammatory disease that most commonly presents as well-demarcated erythematous plaques with micaceous scale, affecting roughly 3-4% of the US population [1-4]. Clinically, lesions are often well-demarcated thick, scaly, erythematous plaques, characteristically located on the extensor surfaces, such as elbows and knees [1]. In most cases, clinical impression is sufficient to diagnose psoriasis. However, sometimes psoriasis can mimic other cutaneous disorders and biopsy may be warranted to discover the diagnosis. We report an unusual presentation of psoriasis clinically mimicking mycosis fungoides.

Keywords: psoriasis, mycosis fungoides

Case Synopsis

A 73-year-old woman presented to the dermatology clinic requesting a total body skin examination and complaining of asymptomatic, erythematous patches on the arms and buttocks for years. At the time of initial evaluation, she was on no systemic or topical interventions.

Physical exam showed erythematous, finely scaly, slightly atrophic patches on the right superior and left inferior buttocks (**Figure 1**a) and erythematous, slightly scaly patches on the right lateral and left upper arms (**Figure 1**b). Given the clinical morphology of the lesions, the diagnosis of mycosis fungoides was suspected and two 4-mm biopsies were obtained to confirm the diagnosis.

Biopsies displayed classic findings of psoriasis including foci of neutrophilic parakeratosis, loss of granular layer with thinning of the suprapapillary plates, prominent dermal vasculature, and sparse perivascular lymphocytic infiltrate (**Figure 2**). No characteristic findings consistent with mycosis fungoides were identified.

Case Discussion

Psoriasis is a chronic immune-mediated inflammatory disease affecting 3-4% of the population in the United States [2-4]. Caucasians have the highest disease prevalence (3.6%), followed by African Americans (1.9%) and Hispanics (1.6%), with equal gender distribution [3]. When genetically susceptible individuals are exposed to various antigens, they undergo T cell activation resulting in keratinocyte hyperproliferation, epidermal dysmaturation, and cutaneous inflammation [1]. The pathogenesis is complex and involves interactions between macrophages, dendritic cells, T cells, and inflammatory cytokines including TNF, IL-17, and IL-23 [1]. This inflammatory cascade presents clinically as well-demarcated erythematous plaques with thick, micaceous scale [1]. The most common locations of involvement include scalp, trunk, buttocks, and extensor surfaces of limbs[1].

Lesions in the patch stage of mycosis fungoides are typically observed as erythematous patches lacking induration or elevation and with fine scale. They are often round and the skin appears wrinkled and atrophic [7]. Sites typically involved include sun-protected areas, particularly the buttocks, groin, breasts, upper thighs, and axillae [7]. Although there are many reports in the literature of mycosis fungoides presenting as psoriasis or other diseases, there are strikingly few published cases of psoriasis presenting as mycosis fungoides [6, 10-12]. Taking into consideration this potentially confusing clinical picture, histology may be required to differentiate mycosis fungoides and psoriasis. Histologically,

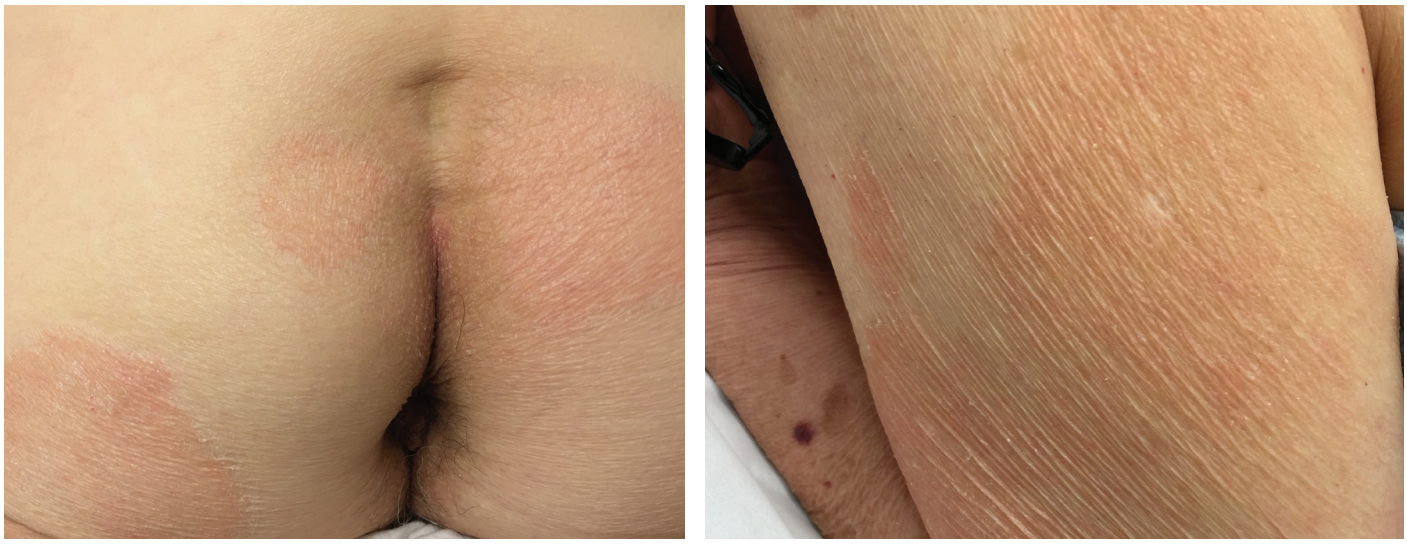

Figure 1. *A) Erythematous, fine, scaly, slightly atrophic patches on the right superior and left inferior buttocks and B) left, lateral, upper arm*

patch-stage mycosis fungoides is characterized by band-like lymphocytic infiltrate within the superficial dermis, acanthosis of the epidermis, papillary fibrosis of the dermis, and epidermotropism [7, 8]. Epidermotropism is characteristic of mycosis fungoides, reportedly present in approximately 96% of cases [9].

In contrast, psoriasis is characterized by a hyperplastic and acanthotic epidermis with focal accumulation of neutrophils and lymphocytes. These foci also contain parakeratosis and a thinned or absent stratum granulosum. Characteristic micropustules of Kogoj and microabscesses of Monro may be seen [5]. Early lesions may possess only superficial perivascular lymphocytic infiltrates and dilated tortuous capillaries. This pattern of parakeratosis containing neutrophils and lack of epidermotropism helps to distinguish psoriasis from mycosis fungoides histologically [7].

Mycosis fungoides often presents as other dermatoses, including psoriasis. Our case presents a less commonly described clinical presentation of psoriasis mimicking mycosis fungoides. We report

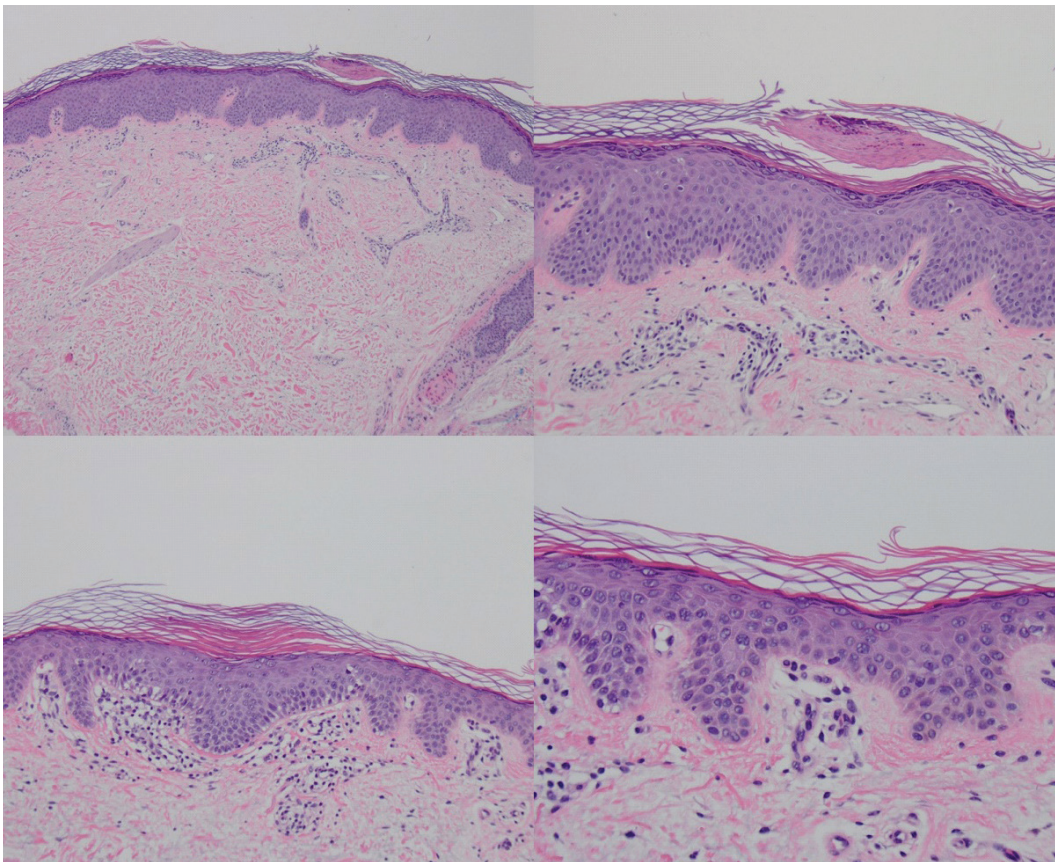

Figure 2. *Foci of neutrophilic parakeratosis, loss of granular layer with thinning of the suprapapillary plates, prominent dermal vasculature and sparse perivascular lymphocytic infiltrate. H&E, 10x.*

this case as an atypical morphological presentation of psoriasis.

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